CLAIMS

What is Claimed is:

1.   A method of managing modification of configuration states of a plurality of resources of multiple types in a dynamic data center, said method comprising:

creating a modification policy for said resources;

obtaining a new modification for a configuration state of resources of a particular type; and

automatically performing said new modification to said configuration state of said resources of said particular type based on said modification policy by utilizing a resource pool without degrading a level of service provided by said resources of said particular type, wherein said resource pool includes a plurality of available resources of multiple types.

2.   The method as recited in Claim 1 wherein said automatically performing said new modification includes:

selecting an available resource of said particular type from said resource pool to replace a first resource of said particular type;

performing said new modification to said configuration state of said available resource of said particular type;

configuring said available resource to provide a service provided by said first resource of said particular type;

directing new requests for said service provided by said first resource to said available resource;

causing said first resource to discontinue providing said service after completing existing service requests; and

performing said new modification to said configuration state of said first resource, wherein said first resource represents another available resource from said resource pool.

3.   The method as recited in Claim 1 wherein said dynamic data center is a utility data center.

4.   The method as recited in Claim 1 wherein said configuration
5   state includes a firmware configuration state.

5.   The method as recited in Claim 1 wherein said configuration state includes an operating system configuration state.

10   6.   The method as recited in Claim 1 wherein said configuration state includes an application configuration state.

7.   The method as recited in Claim 1 wherein said new modification is one of an update, a patch, a fix, and an upgrade.
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8.   The method as recited in Claim 1 wherein said plurality of resources includes a resource that is one of a server, a load balancer, a firewall, and a VPN (virtual private network) appliance.

20   9.   The method as recited in Claim 1 wherein said obtaining said new modification includes:
    testing said new modification.

10.   The method as recited in Claim 1 wherein said obtaining said
25   new modification includes:
    determining whether said new modification is certified for use in said dynamic data center.

11.   A computer-readable medium comprising computer-
30   executable instructions stored therein for performing a method of managing

modification of configuration states of a plurality of resources of multiple types in a dynamic data center, said method comprising:

creating a modification policy for said resources;

obtaining a new modification for a configuration state of resources of

5 a particular type; and

automatically performing said new modification to said configuration state of said resources of said particular type based on said modification policy by utilizing a resource pool without degrading a level of service provided by said resources of said particular type, wherein said resource

10 pool includes a plurality of available resources of multiple types.

12. The computer-readable medium as recited in Claim 11 wherein said automatically performing said new modification includes:

selecting an available resource of said particular type from said

15 resource pool to replace a first resource of said particular type;

performing said new modification to said configuration state of said available resource of said particular type;

configuring said available resource to provide a service provided by said first resource of said particular type;

20 directing new requests for said service provided by said first resource to said available resource;

causing said first resource to discontinue providing said service after completing existing service requests; and

performing said new modification to said configuration state of said

25 first resource, wherein said first resource represents another available resource from said resource pool.

13. The computer-readable medium as recited in Claim 11 wherein said dynamic data center is a utility data center.

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14.   The computer-readable medium as recited in Claim 11 wherein said configuration state includes a firmware configuration state.

15.   The computer-readable medium as recited in Claim 11 wherein said configuration state includes an operating system configuration state.

16.   The computer-readable medium as recited in Claim 11 wherein said configuration state includes an application configuration state.

17.   The computer-readable medium as recited in Claim 11 wherein said new modification is one of an update, a patch, a fix, and an upgrade.

18.   The computer-readable medium as recited in Claim 11 wherein said plurality of resources includes a resource that is one of a server, a load balancer, a firewall, and a VPN (virtual private network) appliance.

19.   The computer-readable medium as recited in Claim 11 wherein said obtaining said new modification includes:
       testing said new modification.

20.   The computer-readable medium as recited in Claim 11 wherein said obtaining said new modification includes:
       determining whether said new modification is certified for use in said dynamic data center.

21.   A system comprising
       a dynamic data center including:

a service pool including a plurality of resources of multiple types, each resource providing a particular service;

a resource pool including a plurality of available resources of multiple types; and

5   a controller for controlling said resources and said available resources; and

a configuration state manager for automatically performing a new modification to a configuration state of said resources of a particular type based on a modification policy by utilizing said resource pool without

10   degrading a level of service provided by said resources of said particular type.

22.   The system as recited in Claim 21 further comprising a graphical user interface to enable creation of said modification policy.

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23.   The system as recited in Claim 21 wherein said dynamic data center is a utility data center.

24.   The system as recited in Claim 21 wherein said configuration

20   state includes a firmware configuration state.

25.   The system as recited in Claim 21 wherein said configuration state includes an operating system configuration state.

25   26.   The system as recited in Claim 21 wherein said configuration state includes an application configuration state.

27.   The system as recited in Claim 21 wherein said new modification is one of an update, a patch, a fix, and an upgrade.

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28.   The system as recited in Claim 21 wherein said plurality of resources includes a resource that is one of a server, a load balancer, a firewall, and a VPN (virtual private network) appliance.